

# SEQUENCE LISTING

<110> RHODES, Simon J.  
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SLOOP, Kyle W.

<120> GENERATION OF DIAGNOSTIC TOOLS TO ASSAY THE HUMAN  
LHX3/P-LIM/LIM-3 FACTOR

<130> 053884-5003

<140> NOT YET ASSIGNED

<141> 2001-08-17

<150> PCT/US00/04424

<151> 2000-02-22

<150> US 60/121,110

<151> 1999-02-22

<160> 113

<170> PatentIn Ver. 2.1

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Arg His Trp His Ser Lys Cys Leu Lys Cys Ser Asp Cys His Thr Pro  
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Arg Ala Lys Glu Lys Arg Leu Lys Lys Asp Ala Gly Arg Gln Arg Trp

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Asp Lys Asp Ser Val Gln Glu Gly Gln Asp Ser Asp Ala Glu Val Ser		
	245	250 255
Phe Pro Asp Glu Pro Ser Leu Ala Glu Met Gly Pro Ala Asn Gly Leu		
	260	265 270
Tyr Gly Ser Leu Gly Glu Pro Thr Gln Ala Leu Gly Arg Pro Ser Gly		
	275	280 285
Ala Leu Gly Asn Phe Ser Leu Glu His Gly Gly Leu Ala Gly Pro Glu		
	290	295 300
Gln Tyr Arg Glu Leu Arg Pro Gly Ser Pro Tyr Gly Val Pro Pro Ser		
305	310	315 320
Pro Ala Ala Pro Gln Ser Leu Pro Gly Pro Gln Pro Leu Leu Ser Ser		
	325	330 335
Leu Val Tyr Pro Asp Thr Ser Leu Gly Leu Val Pro Ser Gly Ala Pro		
	340	345 350
Gly Gly Pro Pro Pro Met Arg Val Leu Ala Gly Asn Gly Pro Ser Ser		
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<211> 2190

<212> DNA

<213> Homo sapiens

<400> 11

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<213> Homo sapiens

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Ile Pro Leu Cys Ala Gly Cys Asp Gln His Ile Leu Asp Arg Phe Ile
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Leu Lys Ala Leu Asp Arg His Trp His Ser Lys Cys Leu Lys Cys Ser
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Asp Cys His Thr Pro Leu Ala Glu Arg Cys Phe Ser Arg Gly Glu Ser
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Val Tyr Cys Lys Asp Asp Phe Phe Lys Arg Phe Gly Thr Lys Cys Ala
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Ala Cys Gln Leu Gly Ile Pro Pro Thr Gln Val Val Arg Arg Ala Gln
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Asp Phe Val Tyr His Leu His Cys Phe Ala Cys Val Val Cys Lys Arg
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Gln Leu Ala Thr Gly Asp Glu Phe Tyr Leu Met Glu Asp Ser Arg Leu
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			340					345					350			
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Asn	Gly	Pro	Ser	Ser	Asp	Leu	Ser	Thr	Gly	Ser	Ser	Gly	Gly	Tyr	Pro	
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<211> 401

<212> PRT

<213> Sus scrofa

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Leu Cys Ala Gly Cys Asp Gln His Ile Leu Asp Arg Phe Ile Leu Lys
 35                      40                      45

Ala Leu Asp Arg His Trp His Ser Lys Cys Leu Lys Cys Ser Asp Cys
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His Thr Pro Leu Ala Glu Arg Cys Phe Ser Arg Gly Glu Ser Leu Tyr
 65                      70                      75                      80

Cys Lys Asp Asp Phe Phe Lys Arg Phe Gly Thr Lys Cys Ala Ala Cys
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Gln Leu Gly Ile Pro Pro Thr Gln Val Val Arg Arg Ala Gln Asp Phe
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Lys	Ala	Asp	Tyr	Glu	Thr	Ala	Lys	Gln	Arg	Glu	Ala	Glu	Ala	Thr	Ala	
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Lys	Arg	Pro	Arg	Thr	Thr	Ile	Thr	Ala	Lys	Gln	Leu	Glu	Thr	Leu	Lys	
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Arg	Pro	Ser	Gly	Ala	Pro	Gly	Ser	Phe	Pro	Leu	Glu	His	Gly	Gly	Leu	
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Ala	Gly	Pro	Glu	Gln	Tyr	Gly	Glu	Leu	Arg	Pro	Ser	Ser	Pro	Tyr	Gly	
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Val	Pro	Ser	Ser	Pro	Ala	Ala	Leu	Gln	Ser	Leu	Pro	Gly	Pro	Gln	Pro	
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Leu	Leu	Ser	Ser	Leu	Val	Tyr	Pro	Glu	Ala	Gly	Leu	Gly	Leu	Val	Pro	
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Ala	Gly	Pro	Pro	Gly	Gly	Pro	Pro	Pro	Met	Arg	Val	Leu	Ala	Gly	Asn	
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Gly	Pro	Ser	Ser	Asp	Leu	Ser	Thr	Gly	Ser	Ser	Gly	Gly	Tyr	Pro	Asp	
		370				375					380					
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 <212> DNA  
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 Leu Lys Ala Leu Asp Arg His Trp His Ser Lys Cys Leu Lys Cys Ser  
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 Asp Cys His Thr Pro Leu Ala Glu Arg Cys Phe Ser Arg Gly Glu Ser



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Ala	Cys	Gln	Leu	Gly	Ile	Pro	Pro	Thr	Gln	Val	Val	Arg	Arg	Ala	Gln
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Asp	Phe	Val	Tyr	His	Leu	His	Cys	Phe	Ala	Cys	Val	Val	Cys	Lys	Arg
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Gln	Leu	Ala	Thr	Gly	Asp	Glu	Phe	Tyr	Leu	Met	Glu	Asp	Ser	Arg	Leu
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Thr	Ala	Lys	Arg	Pro	Arg	Thr	Thr	Ile	Thr	Ala	Lys	Gln	Leu	Glu	Thr
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Leu	Lys	Ser	Ala	Tyr	Asn	Thr	Ser	Pro	Lys	Pro	Ala	Arg	His	Val	Arg
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Glu	Gln	Leu	Ser	Ser	Glu	Thr	Gly	Leu	Asp	Met	Arg	Val	Val	Gln	Val
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Ser	Asp	Ala	Glu	Val	Ser	Phe	Thr	Asp	Glu	Pro	Ser	Met	Ala	Glu	Met
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Tyr	Gly	Val	Pro	Ser	Ser	Pro	Ala	Ala	Leu	Gln	Ser	Leu	Pro	Gly	Pro
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Gln	Pro	Leu	Leu	Ser	Ser	Leu	Val	Tyr	Pro	Glu	Ala	Gly	Leu	Gly	Leu
			340					345					350		
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Ile Leu Asp Arg Phe Ile Leu Lys Val Leu Glu Arg Thr Trp His Ala  
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Lys Cys Leu Gln Cys Ser Glu Cys His Gly Gln Leu Asn Asp Lys Cys  
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Phe Ala Arg Asn Gly Gln Leu Phe Cys Lys Glu Asp Phe Phe Lys Arg  
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Tyr Gly Thr Lys Cys Ser Ala Cys Asp Met Gly Ile Pro Pro Thr Gln  
100 105 110

Val Val Arg Arg Ala Gln Asp Asn Val Tyr His Leu Gln Cys Phe Leu  
115 120 125

Cys Ala Met Cys Ser Arg Thr Leu Asn Thr Gly Asp Glu Phe Tyr Leu  
130 135 140

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145 150 155 160

Ala Lys Gly Leu Tyr Leu Asp Gly Ser Leu Asp Gly Asp Gln Pro Asn  
165 170 175

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Leu	Gly	Leu	Asp	Glu	Gly	Ala	Ser	Pro	His	Ser	Ile	Arg	Gly	Ser	Tyr			
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Met	His	Gly	Ser	Ser	Ser	Pro	Ser	Gln	Tyr	Pro	Pro	Ser	Ser	Arg	Ser			
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Pro	Pro	Pro	Val	Gly	Gln	Gly	His	Thr	Phe	Gly	Ser	Tyr	Pro	Asp	Asn			
			325						330					335				
Ile	Val	Tyr	Thr	Asn	Ile	Asp	Gln	Ala	Val	Gly	Ser	Ser	Leu	His	Ala			
			340					345					350					
Ser	Lys	Ala	His	His	Arg	Leu	His	Ser	Ser	Asn	Asn	Val	Ser	Asp	Leu			
		355					360					365						
Ser	Asn	Asp	Ser	Ser	Pro	Asp	Gln	Gly	Tyr	Pro	Asp	Phe	Pro	Pro	Ser			
	370					375					380							
Pro	Asp	Ser	Trp	Leu	Gly	Asp	Ser	Gly	Ser	Thr	Asn	Thr	Thr	Ser	Ala			
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Asn	Asn	Asn	Ala	Asn	Asn	Asn	Ser	Ser	Arg	Ser	His	Asn	Asn	Asn	Asn			
			405						410					415				
Ser	Ser	Gly	Gly	Gly	Ser	Gly	Gly	Val	Ser	Val	Ser	Thr	Ala	Pro	Asn			
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<210> 20

<211> 367

<212> PRT

<213> Mus musculus

<400> 20

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Lys	Cys	Thr	Ala	Cys	Gln	Gln	Gly	Ile	Pro	Pro	Thr	Gln	Val	Val	Arg	
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Lys	Ala	Gln	Asp	Phe	Val	Tyr	His	Leu	His	Cys	Phe	Ala	Cys	Ile	Ile	
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Cys	Asn	Arg	Gln	Leu	Ala	Thr	Gly	Asp	Glu	Phe	Tyr	Leu	Met	Glu	Asp	
			100					105					110			
Gly	Arg	Leu	Val	Cys	Lys	Glu	Asp	Tyr	Glu	Thr	Ala	Lys	Gln	Asn	Asp	
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Asp	Ser	Glu	Ala	Gly	Ala	Lys	Arg	Pro	Arg	Thr	Thr	Ile	Thr	Ala	Lys	
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Arg	His	Val	Arg	Glu	Gln	Leu	Ser	Ser	Glu	Thr	Gly	Leu	Asp	Met	Arg	
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Val	Val	Gln	Val	Trp	Phe	Gln	Asn	Arg	Arg	Ala	Lys	Glu	Lys	Arg	Leu	
			180					185					190			
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Ala Gly Gln Gly Val Ser Gln Thr Leu Arg Ala Met Ala Gly Gly Pro		
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Thr Ser Asp Leu Ser Thr Gly Ser Ser Val Gly Tyr Pro Asp Phe Pro		
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 <211> 402  
 <212> PRT  
 <213> Mus musculus

<400> 21

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Ile Pro Met Cys Ala Gly Cys Asp Gln His Ile Leu Asp Arg Phe Ile		
	35	40 45
Leu Lys Ala Leu Asp Arg His Trp His Ser Lys Cys Leu Lys Cys Ser		
	50	55 60
Asp Cys His Val Pro Leu Ala Glu Arg Cys Phe Ser Arg Gly Glu Ser		
	65	70 75 80
Val Tyr Cys Lys Asp Asp Phe Phe Lys Arg Phe Gly Thr Lys Cys Ala		
	85	90 95
Ala Cys Gln Leu Gly Ile Pro Pro Thr Gln Val Val Arg Arg Ala Gln		
	100	105 110
Asp Phe Val Tyr His Leu His Cys Phe Ala Cys Val Val Cys Lys Arg		
	115	120 125
Gln Leu Ala Thr Gly Asp Glu Phe Tyr Leu Met Glu Asp Ser Arg Leu		
	130	135 140
Val Cys Lys Ala Asp Tyr Glu Thr Ala Lys Gln Arg Glu Ala Glu Ala		
	145	150 155 160
Thr Ala Lys Arg Pro Arg Thr Thr Ile Thr Ala Lys Gln Leu Glu Thr		
	165	170 175
Leu Lys Ser Ala Tyr Asn Thr Ser Pro Lys Pro Ala Arg His Val Arg		
	180	185 190

Glu Gln Leu Ser Ser Glu Thr Gly Leu Asp Met Arg Val Val Gln Val  
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 Trp Phe Gln Asn Arg Arg Ala Lys Glu Lys Arg Leu Lys Lys Asp Ala  
 210 215 220  
 Gly Arg Gln Arg Trp Gly Gln Tyr Phe Arg Asn Met Lys Arg Ser Arg  
 225 230 235 240  
 Gly Ser Ser Lys Ser Asp Lys Asp Ser Ile Gln Glu Gly Gln Asp Ser  
 245 250 255  
 Asp Ala Glu Val Ser Phe Thr Asp Glu Pro Ser Met Ala Asp Met Gly  
 260 265 270  
 Pro Ala Asn Gly Leu Tyr Ser Ser Leu Gly Glu Pro Ala Pro Ala Leu  
 275 280 285  
 Gly Arg Pro Val Gly Gly Leu Gly Ser Phe Thr Leu Asp His Gly Gly  
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 Leu Thr Gly Pro Glu Gln Tyr Arg Glu Leu Arg Pro Gly Ser Pro Tyr  
 305 310 315 320  
 Gly Ile Pro Pro Ser Pro Ala Ala Pro Gln Ser Leu Pro Gly Pro Gln  
 325 330 335  
 Pro Leu Leu Ser Ser Leu Val Tyr Pro Asp Thr Asn Leu Ser Leu Val  
 340 345 350  
 Pro Ser Gly Pro Pro Gly Gly Pro Pro Pro Met Arg Val Leu Ala Gly  
 355 360 365  
 Asn Gly Pro Ser Ser Asp Leu Ser Thr Glu Ser Ser Ser Gly Tyr Pro  
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 Asp Phe Pro Ala Ser Pro Ala Ser Trp Leu Asp Glu Val Asp His Ala  
 385 390 395 400  
 Gln Phe

<210> 22

<211> 8867

<212> DNA

<213> Homo sapiens

<400> 22

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<210> 23  
 <211> 182  
 <212> DNA  
 <213> Homo sapiens

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<210> 24  
 <211> 212  
 <212> DNA  
 <213> Homo sapiens

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	180
	212

<210> 25  
 <211> 2515  
 <212> DNA  
 <213> Homo sapiens

<400> 25

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<210> 26

<211> 2540

<212> DNA

<213> Homo sapiens

<400> 26

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<210> 27

<211> 2070

<212> DNA

<213> Homo sapiens

<400> 27

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acaacacctc	gcccgaagccg	gcgcgccacg	tgcgcgagca	gctctcgtcc	gagacggggc	600
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gcggtccaa gtcggacaag gacagcgttc aggaggggca ggacagcgac gctgaggtct 780
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```

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<210> 28
<211> 26
<212> PRT
<213> Homo sapiens

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```

<400> 28
Met Leu Leu Glu Thr Gly Leu Glu Arg Asp Arg Ala Arg Pro Gly Ala
  1             5             10             15
Ala Ala Val Cys Thr Leu Gly Gly Thr Arg
          20             25

```

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<210> 29
<211> 31
<212> PRT
<213> Homo sapiens

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<400> 29
Met Glu Ala Arg Gly Glu Leu Gly Pro Ala Arg Glu Ser Ala Gly Gly
  1             5             10             15
Asp Leu Leu Leu Ala Leu Leu Ala Arg Arg Ala Asp Leu Arg Arg
          20             25             30

```

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<210> 30
<400> 30
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<210> 31

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<211> 29  
<212> PRT  
<213> Sus scrofa

<400> 31  
Met Leu Leu Glu Thr Glu Leu Ala Gly Asp Arg Asp Arg Pro Gly Ala  
1 5 10 15  
Pro Ala Ala Ala Ala Val Cys Thr Leu Pro Gly Thr Arg  
20 25

<210> 32  
<400> 32  
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<210> 33  
<211> 31  
<212> PRT  
<213> Sus scrofa

<400> 33  
Met Glu Ala Arg Gly Glu Leu Gly Pro Ser Arg Glu Ser Ala Gly Gly  
1 5 10 15  
Asp Leu Leu Leu Ala Leu Leu Ala Arg Arg Glu Asp Leu Arg Arg  
20 25 30

<210> 34  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR primer

<400> 34  
atgctgctgg aaacggggct cg 22

<210> 35  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: PCR primer

<400> 35  
ccgagtcctcg cccaagggtgc 20

<210> 36  
<211> 20  
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 36

atggaggcgc gcggggagct

20

<210> 37

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 37

ctcggcgcag gtctgccctc

20

<210> 38

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

<400> 38

gcgaccgagc gaggcccggg gccgc

25

<210> 39

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Probe

<400> 39

cccggcccgg gagtcggcgg gaggc

25

<210> 40

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Probe

<400> 40

ttccccgatg agccttcctt ggcggaa

27

<210> 41  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 41

ggcacgagcc ccgcacgacg

20

<210> 42

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:alpha-GSU  
sequence

<400> 42

gatccggtac ttagctaatt aatga

26

<210> 43

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Lhx3 consensus  
binding sequence

<400> 43

gatcccagaa aattaattaa ttgtaa

26

<210> 44

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 44

ggcacgagcc ccgcacgacg

20

<210> 45

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 45  
tttgaagtct tggaaagtgc 20

<210> 46  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 46  
tgacctcgga ggagcgcgtc t 21

<210> 47  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 47  
tcgtccttgc agtaaacgct 20

<210> 48  
<211> 20  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 48  
agcgtttact gcaaggacga 20

<210> 49  
<211> 20  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 49  
cgcacttggt cccgaagcgc 20

<210> 50  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 50  
gcgcttcggg accaagtgcg 20

<210> 51  
<211> 21  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 51  
cggggaagga gacctcagcg t 21

<210> 52  
<211> 19  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 52  
ggacaaggac agcgttcag 19

<210> 53  
<211> 18  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 53  
ctcccgtaga ggccattg 18

<210> 54  
<211> 41  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 54  
cgcaagcttc caccatgtgg gaggggcggc cacaggagct g 41

<210> 55

<211> 33  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 55  
cgggatccaa gcagcgagag gccgaggcca cgg 33

<210> 56  
<211> 75  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 56  
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cacaggagct gggag 75

<210> 57  
<211> 21  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 57  
caattaaccc tcactaaagg g 21

<210> 58  
<211> 31  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 58  
cggaattcat gaataatgat gatactaatt c 31

<210> 59  
<211> 34  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 59

ccgctcgagg gatattagct tgtcttgcca tttc

34

<210> 60

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 60

cgggatcctg ggaggggagg ccacaggagc tg

32

<210> 61

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 61

cggaattcag tcagaactga gcgtgatcc

29

<210> 62

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 62

cgggatccaa gcagcgagag gccgaggcca cgg

33

<210> 63

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 63

cggaattcag tcagaactga gcgtgatcc

29

<210> 64

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 64

acattaggta cttagcta taaatgtg

28

<210> 65

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 65

cacatttaat tagctaagta cctaattgt

28

<210> 66

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 66

acattaggta cttggcgcg ccaatgtg

28

<210> 67

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 67

cacatttggc gcgccaagta cctaattgt

28

<210> 68

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 68

cgggatccat gctggatcgg gatgtgggcc caac

34

<210> 69

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 69

cggaattccg tcttctgctc cctggagctg tg

32

<210> 70

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 70

cggaattcta caacacctcg cccaagccgg

30

<210> 71

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 71

cggaattcgg aacgaggggc ccttgac

27

<210> 72

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 72

gatccaaaag gaaatgagag a

21

<210> 73

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 73

cagtgcaggt ggtacacgaa gtcct

25

<210> 74  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 74  
cagtgcaggt ggtacacgaa gtcct

25

<210> 75  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 75  
ggacaaggac agcgttcag

19

<210> 76  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 76  
ctcccgtaga ggccattg

18

<210> 77  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Probe

<400> 77  
ttccccgatg agccttcctt ggcggaa

27

<210> 78  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 78

cggaattcta caacacctcg cccaagccgg

30

<210> 79

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 79

cggaattcgg aacgaggggc ccttgac

27

<210> 80

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 80

cgggatccga tcgcttcggc agcagctg

28

<210> 81

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 81

cgggatcctt gatatttacc ccggaggc

28

<210> 82

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 82

gcgaagcttg gaactgagcg tggcttacct ca

32

<210> 83

<211> 29

<212> DNA

<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 83  
tacaagcttc gcgatgctgc tggaaacgg 29

<210> 84  
<211> 29  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 84  
tacaagctta ccatggaggc gcgcgggga 29

<210> 85  
<211> 29  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 85  
cccgtacca actgagcgtg gtctacctc 29

<210> 86  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 86  
ggacaaggac agcgttcag 19

<210> 87  
<211> 18  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 87  
ctcccgtaga ggccattg 18

<210> 88  
<211> 28



<212> DNA  
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 <220>  
 <223> Description of Artificial Sequence:PCR primer  
  
 <400> 88  
 cgggatccat gctgctggaa acggggct 28  
  
 <210> 89  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:PCR primer  
  
 <400> 89  
 cgggatccat ggaggcgcgc ggggagct 28  
  
 <210> 90  
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 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:PCR primer  
  
 <400> 90  
 cggaattctc agaactgagc gtggtcta 28  
  
 <210> 91  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:PCR primer  
  
 <400> 91  
 tggtcacagc ctgcacacat 20  
  
 <210> 92  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:PCR primer  
  
 <400> 92  
 aaccactgga ttagtgactg 20

<210> 93  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 93

gaagttcagg gtcggaggg

19

<210> 94

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 94

tggtcacagc ctgcacacat

20

<210> 95

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 95

cagaaaatta attaattgta a

21

<210> 96

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 96

cgggatccat gctgctggaa acggggct

28

<210> 97

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 97  
cggaattctc agaactgagc gtggtcta

28

<210> 98  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 98  
cgggatccat ggaggcgcgc ggggagct

28

<210> 99  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 99  
cggaattctc agaactgagc gtggtcta

28

<210> 100  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 100  
acattagga cttagcta taaatgtg

28

<210> 101  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 101  
cacatttaac tagctaagta cctaattg

28

<210> 102  
<211> 192  
<212> DNA  
<213> Homo sapiens

<400> 102  
tcttccggga gaggecccct cctctcccca gaccacaggg ggcctctctg cctccagccc 60  
caccttcccc gggagaagct ttccccaatc cccaggtctc tagatcattc tggtctcgag 120  
tatcctgtgg aggaggcaaa aatgcctggc gcccttctc tccaagctca attctctaag 180  
cccctcaggg tc 192

<210> 103  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 103  
caaccgctgt cccgcactct t 21

<210> 104  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 104  
gaaagtctcg gactggagag t 21

<210> 105  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 105  
cagtgccaca acctcactca 20

<210> 106  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 106  
tacgaggtga cccagaactt 20

<210> 107  
<211> 20

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 107  
cctggccttg gtgattgtga

20

<210> 108  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 108  
tttcagacca ggaaaggtgg

20

<210> 109  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 109  
cgaaatgagc ctcgcgcttc

20

<210> 110  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 110  
gctgccgcgc ctcaccgct

19

<210> 111  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 111  
aggagtccac taactccatg

20

<210> 112  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 112  
cgctgactga gcctctgctt 20

<210> 113  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 113  
cctcgtgtga ggtgcagggt 20